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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,681	08/07/2003	Masaaki Oguri	87900D-000511/US	2687
30593	7590	01/25/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			NGUYEN, VINCENT Q	
P.O. BOX 8910			ART UNIT	
RESTON, VA 20195			PAPER NUMBER	
			2858	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/635,681

Applicant(s)

OGURI, MASAOKI

Examiner

Vincent Q Nguyen

Art Unit

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-- Th MAILING DATE of this communication appears on the cover sheet with the corresponding address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on response 12/15/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8, 12-16, 18 and 20 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 9-11 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6, 19, are rejected under 35 U.S.C. 102(b) as being anticipated by Schmidt (4,736,208).

Regarding claims 1, 6, 19, Schmidt discloses digital measuring head comprising (figure 7) an arm (13) supported rotatably around a support point (2) arranged on a base (The base of element 12); a finger (1) having the contact element (3) at a tip end and mounted to a tip end portion of the arm (13); and a scale (6) and a read head (12), one of which is provided at a rear end portion of the arm (13) and the other of which is arranged on the base (See element 12), wherein displacement of the contact element (3) which contacts with the work (4) is measured with the scale and the read head.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 2, 3, 7, 12-16, 18, 20, are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt (4,736,208) in view of Motchenbacher (3,232,099).

Regarding claims 2, 7, 12-15, 18, 20, Schmidt does not disclose the displacement is measured based on at least one of refraction and reflection of light.

Motchenbacher discloses a system similar to that of Schmidt and further discloses the displacement is measured base on refraction and reflection of light (Motchenbacher's column 3, lines 54-70) for the purpose of determining the roughness because the intensity of the light reflected off of the surface is a function of both the amount of deformation and the roughness of the reflecting surface.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the measurement based on refraction and reflection of light as taught by Motchenbacher into the system of Schmidt because the intensity of the light reflected off of the surface is a function of both the amount of deformation and the roughness of the reflecting surface (See also column 3, lines 50-68 of Prussia et al. 5,372,030, which is not applied to reject the claim).

Regarding claims 3, 8, 16, pertinent to the discussion of claim 2, Schmidt does not disclose the displacement is measured based on at least one of refraction and reflection of light.

Motchenbacher discloses a system similar to that of Schmidt and further discloses an emitter adapted to emit light, and a receiver adapted to receive at least one of reflected light and refracted light (The limitation is true not only for the prior art of Motchenbacher but also true for any prior art using light detector).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the light emitter and receiver as taught by Motchenbacher into the system of Schmidt because it is routine for a light detector including the prior art of Motchenbacher having light emitter and receiver (See Motchenbacher's figure 2).

***Allowable Subject Matter***

5. Claims 4, 5, 9-11, 17, are allowed.

***Response to Arguments***

6. Applicant's arguments filed 12/15/2004 have been fully considered but they are not persuasive.

In response to Applicant's argument that Schmidt merely discloses a measuring device 12, which is mounted only on the end of the rod 13, and not mounted on any base. Measuring scanner 12 is mounted on the base of the measuring scanner 12 is clearly incorrect. Applicants assert that the measuring scanner 12 cannot be mounted on itself.

It is respectfully reminded that the claim is interpreted as follow:

Regarding claims 1, 6, 19, Schmidt discloses digital measuring head comprising (figure 7) an arm (13) supported rotatably around a support point (2) arranged on a base (The base of element 12); a finger (1) having the contact element (3) at a tip end and mounted to a tip end portion of the arm (13); and a scale (6) and a read head (12),

one of which is provided at a rear end portion of the arm (13) and the other of which is arranged on the base (See element 12), wherein displacement of the contact element (3) which contacts with the work (4) is measured with the scale and the read head.

Examiner does not see why the interpretation is incorrect. The claim recites: "... an arm (13) supported rotatably around a support point (2) arranged on a base (The base of element 12); a finger (1) having the contact element (3) at a tip end and mounted to a tip end portion of the arm (13) ..."

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent No. 5,031,360 discloses a defect detector which is used for stopping operation of the dicing saw when such operation would be adverse to the integrity of the work product (semiconductor dice). Infrared light from a light transducer is transmitted from a light transmitter to a detector at an opposite side of the saw's blade from the transmitter.

Patent No. 4,830,486 discloses device having a means for comparing the detected intensities for a plurality of angles of incidence with the stored sets in order to approximate the roughness of the surface by the roughness of one of the predetermined surfaces.

Patent No. 4,770,536 discloses a device for measuring surface reflectance as a measure of surface roughness of a specimen. The instrument includes a housing

having a source of light at one end and a pair of photosensors at the other end, one of which is positioned to receive rays directly from the light source and the other of which is oriented in a different direction to receive light only after the rays from the light source have struck the specimen and are scattered back onto the second sensor.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

#### ***Contact Information***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent Q Nguyen whose telephone number is (571) 272-2234. The examiner can normally be reached on 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



January 21, 2005

Vincent Q. Nguyen  
Primary Examiner  
Art Unit 2858